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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,572	08/26/2003	Mark Clark Cesa	BP7969-01	4095

7590 04/03/2006

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EXAMINER

SACKEY, EBENEZER O

ART UNIT	PAPER NUMBER
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1626

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/648,572	Applicant(s) CESA ET AL.	
	Examiner EBENEZER SACKY	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

Claims 1-13 are pending.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Priority

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicants need to enter the continuing data on the first line of the specification after the heading.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not entirely clear what applicants consider to be low levels of acetamide.

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Presson et al., (U.S. Patent number 4,362,603), Schaller et al., (German Patent number DD 259 530) and Campbell et al., (U.S. Patent number 3,313,726) in combination.

Applicants claim a process of producing highly purified acetonitrile having low levels of acetamide comprising a multistep distillation under reflux conditions to remove acetonitrile and water followed by acidic ion exchange resin treatment to remove all impurities from the acetonitrile thereby producing highly purified acetonitrile product. The reflux ratios of the various steps are noted.

Determination of the scope and content of the prior art (MPEP §2141.01)

Presson et al., teach a process whereby 99+% pure acetonitrile is continuously recovered from crude acetonitrile containing acetonitrile and water, hydrogen cyanide and other organic impurities, said process comprises a multistep distillation whereby all the impurities from the crude acetonitrile is removed thereby producing highly purified acetonitrile product. See the entire reference especially column 1, lines 39-68, column 3, lines 24-53 and claim 1.

Schaller et al., teach an ultra-purification of acetonitrile by fractional distillation. See the entire reference. Note the reference teaches a reflux stage in the process. See page 2, under working Example. Also note the reflux ratios.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between Presson and the instant process is that Presson does not teach a reflux stage and is silent on the level of acetamide in the purified acetonitrile product.

The difference between Schaller and the instant process is that Schaller does not teach the extra step of passing the highly purified acetonitrile through an ion exchange

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resin for further purification and is also silent on the level of acetamide in the purified product. However, Campbell et al., discloses that removal of impurities in semi-refined nitriles may be accomplished by contacting the semi-refined nitrile with strongly acidic ion exchange resin. See column 1, lines 17-20. Campbell further discloses that purification of nitriles using ion exchange resin is well known in the art. See column 2, lines 34-49.

There is no teaching in the specification to ascertain what applicants consider to be "low levels of acetamide". The use of the phrase appears to be arbitrary without any teaching as to what the acceptable lower or upper limit of acetamide in acetonitrile is.

Thus, to the skilled artisan, the instant process is *prima facie obvious* over the prior art and because Presson et al., disclose a similar process as stated above which results in 99.8% pure acetonitrile product.

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2143)

Accordingly, one of ordinary skill in the art would be motivated to prepare the instant

acetonitrile product by manipulating process parameters such as the use of ion exchange resins and ratios with a reasonable expectation of success in that the resulting product(s) would maintain high yield because one of ordinary skill in the art would expect the use of ion exchange resin to result in the same product because Campbell discloses that the use of ion exchange resin in the purification of nitriles is well-known. Moreover, with Presson et al., disclosing a similar process with a product purity of 99.8%, one of skill would expect such a process to remove almost all impurities including levels acetamide.

Thus, at the time of filing this invention, one of ordinary skill in the art in possession of Presson, Schaller and Campbell is in possession of the instant invention

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barring a showing of unexpected results and/or properties. The required motivation being the desire to prepare acetonitrile.

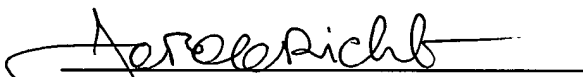
Any inquiry concerning this communication or earlier communications from the examiner should be directed to E. Sackey whose telephone number is (571) 272-0704.

The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane, can be reached on (571) 272-0699. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

EOS
March 3, 2006



Joseph K. McKane
Supervisory Patent Examiner
Art Unit 1626, Group 1600
Technology Center 1